CLAIMS

1. A method of inhibiting NF-κB induction in a cell comprising administering an effective amount of a peptide which blocks the interaction of one or more IKKs and NEMO.

2. The method of claim 1 wherein the IKK is selected from the group consisting of IKKα and IKKβ.

3. The method of claim 1 wherein the peptide comprises at least one NEMO binding domain.

4. The method of claim 3 wherein the peptide further comprises at least one membrane translocation domain.

5. The method of claim 3 wherein the NEMO binding domain is selected from the group consisting of SEQ ID NO: 2, 4, 5, 6, 11, 12, 16 and 17.

6. A method of inhibiting inflammation in a mammal comprising administering an effective amount of a peptide which blocks the interaction of IKK and NEMO.

7. The method of claim 6 wherein the peptide blocks the recruitment of leukocytes into sites of acute and chronic inflammation.

8. The method of claim 6 wherein the peptide down-regulates the expression of E-selectin on endothelial cells.

9. The method of claim 6 wherein the peptide blocks osteoclast differentiation.

10. A method of inhibiting NF-κB-dependent target gene expression in a cell comprising administering an effective amount of a peptide which blocks the interaction of one or more IKKs and NEMO.

11. The method of claim 10 wherein the IKK is IKKβ.

12. The method of claim 10 wherein the NF-κB-dependent target gene is E-selectin.

13. A method of identifying an agent which interacts with the NEMO binding domain comprising the steps of:

(a) exposing cells which express NEMO and NF-κB to an agent; and

(b) determining whether the agent modulates activation of NF-κB by the cell, wherein an alteration in activation of NF-κB is indicative of an agent which interacts with the NEMO binding domain.

14. A method of identifying an agent which modulates the activity of NEMO comprising the steps of:

(a) exposing cells which express NEMO to an agent; and

(b) determining whether the agent modulates the activity of NEMO, thereby identifying an agent which modulates the activity of NEMO.

15. A fusion peptide comprising the NEMO binding domain and at least one membrane translocation domain.

16. The fusion peptide of claim 15 wherein the membrane translocation domain facilitates membrane translocation *in vivo*.

17. The fusion peptide of claim 15 wherein the membrane translocation domain is selected from the group consisting of the third helix of the *antennapedia* homeodomain and HIV-1 Tat protein.

18. The fusion peptide of claim 15 wherein the NEMO binding domain is selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

19. An isolated peptide selected from the group consisting of:

(a) an isolated peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17, 18 and 19;

(b) an isolated peptide comprising a fragment of at least three amino acids of an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19;

(c) an isolated peptide comprising conservative amino acid substitutions of the amino acid sequences selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19; and

(d) naturally occurring amino acid sequence variants of amino acid sequences selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19.

20. A composition comprising the peptide of claim 15 or 19.

21. The composition of claim 20 further comprising a carrier.

22. An isolated peptide consisting of the amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19.

23. An isolated nucleic acid molecule selected from the group consisting of: (a) an isolated nucleic acid molecule that encodes the amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19; and (b) an isolated nucleic acid molecule that encodes a fragment of at least three (3) amino acids of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19.